

JAPAN

EDICT OF GOVERNMENT

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JIS B 6599 (1991) (English): Veneer slicers --
Test and inspection methods

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*The citizens of a nation must
honor the laws of the land.*

Fukuzawa Yukichi

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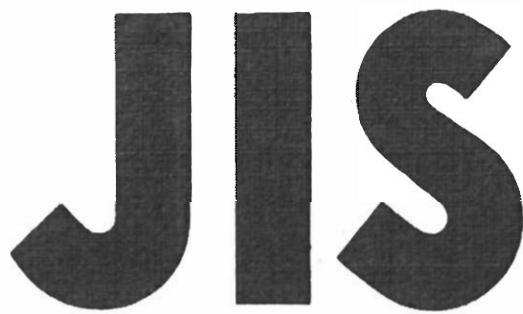


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JAPANESE INDUSTRIAL STANDARD

**Veneer slicers —
Test and inspection methods**

JIS B 6599^{—1991}

Translated and Published

by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

1. Scope

This Japanese Industrial Standard specifies the test methods relating to functions and running performances as well as the inspection methods on static accuracy and machining accuracy of the slicers of which lengths of tool mounting face are 1200 mm or over to 6000 mm or under and of which strokes are 750 mm or over to 2200 mm or under.

Remarks 1. The slicer means the machine which manufactures the veneers of the prescribed thickness by reciprocating motion of a cutting tool or flitch to cut (See JIS B 0114).

2. The applicable standards to this Standard are as given in the following:

JIS B 0114-Glossary of terms for wood working machinery

JIS B 6507-General code of safety for wood working machinery

JIS B 6521-Methods of measurement for noise emitted by wood working machinery

3. The units and numerical values given in { } in the Standard are based on the traditional metric units and are appended for informative reference.

2. Functional test methods

The function tests of the slicer shall be in accordance with Table 1.

Table 1. Functional tests

No.	Test item	Test method
1	Electrical equipment	Before and after the running test, examine the insulation conditions once each.
2	Start, stop and running operation of planer table or flitch table	At an appropriate speed, carry out start and stop of the planer table or flitch table repeatedly 10 times to examine the smoothness and reliability of actions.
3	Changing operation of speed of planer table or flitch table	Examine the smoothness of actions and reliability of indications of the operating device.
4	Lifting and lowering operation of flitch table	Lift and lower the flitch table to examine the smoothness and uniformity of actions over total length of movement.
5	Mounting and dismounting of tool and nose bar	Examine the smoothness and reliability of mounting and dismounting of the cutting tool and nose bar and the clamping of the clamping screw.
6	Mounting and dismounting of workpiece	Examine the smoothness and reliability of the mounting and dismounting of the workpiece and the clamping of the clamping screw.
7	Sheeting operation	Examine the smoothness and reliability of the function.
8	Cutting tool sliding device	Examine the smoothness and reliability of the function.
9	Carrying out device of veneers	Examine the smoothness and reliability of the function.
10	Safety device	Examine the reliability of the safety function for workers and machine protective function (See B 6507).
11	Lubrication device	Examine the reliability of functions such as oiltightness and proper distribution of oil quantity.
12	Oil hydraulic device	Examine the reliability of functions such as oil-tightness and pressure regulation.
13	Pneumatic device	Examine the reliability of functions such as airtightness and pressure regulation.
14	Accessories	Examine the reliability of functions.

Remarks: For the slicer which is not provided with the said function, the test item corresponding to this in Table 1 shall be omitted.

3. Running test method

3.1 No-load running test Actuate the planer table or flitch table, continue running for 30 to 60 minutes, measure the required electric power and noise after the bearing temperatures have been stabilized, record on respective items specified in the Recording format 1 of Table 2 and observe that there is no abnormal vibration by the sense of touch.

Furthermore, the measurement of noise shall be in accordance with JIS B 6521.

Table 2. Recording format 1

No.	Time of measurement o'clock · minute	Rotational speed of crank r/min {rpm}	Bearing temperatures of crank			Required electric power			Noise dB (A)	Room temperature °C	Description
			Left	Center	Right	Voltage V	Current A	Input kW			

Remarks 1. For a machine which is provided with the variable speed device of the rotational speed of the planer table or flitch table, recording shall be made on the rotational speeds under at least 2 conditions, including the maximum rotational speed.

2. In the measurement of the required electric power, the required electric powers when the flitch table has been lifted and lowered shall also be measured.
3. The conditions of noise measurement shall be recorded in the description column.

3.2 Load running test Carry out the cutting of a test specimen, measure the required electric power and noise, record on respective items specified in the Recording format 2 of Table 3, and observe the absence of abnormal vibration and the condition of cut surfaces by the sense of touch.

In the measurements of the required electric power, carry out the test by changing the thickness of the test specimen at a definite feed rate, or by changing the feed rate at a definite thickness of the test specimen.

Furthermore, the measurement of noise shall be in accordance with JIS B 6521.

Table 3. Recording format 2

Test specimen	Cutting tool		Cutting condition		Required electric power	
					Tool opening intervals	Stroke of tool
No.	Length mm	Dimensions	Tool angle β °	Material of tool		Inputs
	Width mm			Material and shape of nose bar		
	Thickness mm			No. of cutting n/min		
	Species of tree			Sheeting amount mm		
	Moisture content %			Horizontal H	Tool opening intervals	
	Humidity %			Vertical V		
	Length mm	Dimensions		Cutting angle θ °		
	Width mm			Bias angle(1) °		
	Thickness mm			Attaching angle of flitch in respect to knife edge line °		
	Shape of tool			Moving distance mm	Stroke of tool	
	Tool angle β °			No. n/min		
	Material of tool			Voltage V		
	Material and shape of nose bar			Current A		
	No. of cutting n/min			No-load P_0 kW	Inputs	
	Sheeting amount mm			Load P_1 kW		
	Horizontal H	Tool opening intervals		Cutting power $P_1 - P_0$ kW		
	Vertical V			Noise dB (A)		
	Cutting angle θ °			Description		
	Bias angle(1) °					
	Attaching angle of flitch in respect to knife edge line °					
	Moving distance mm	Stroke of tool				
	No. n/min					
	Voltage V					
	Current A					
	No-load P_0 kW	Inputs				
	Load P_1 kW					
	Cutting power $P_1 - P_0$ kW					
	Noise dB (A)					
	Description					

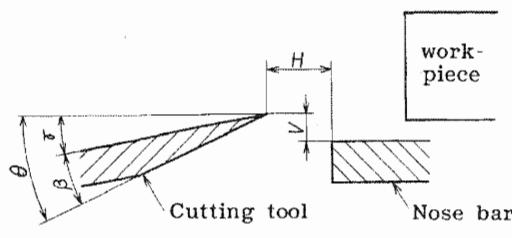
Note (1) This means an angle included between the cutting edge line of the knife and the line vertical to the moving direction of the planer table.

Remarks 1. The test specimens, cutting tools and cutting conditions shall be selected by the manufacturer.

2. The pretreatment conditions (method, temperature and time) of test specimens and measuring conditions of noise shall be stated in the description column.

3. The shapes of the cutting tool and nose bar shall be described by illustrating the main dimensions.

Remarks 4. Explanatory diagram of cutting conditions



θ : cutting angle ($\beta + \gamma$)
 β : tool angle
 γ : clearance angle
 H : horizontal interval of tool opening
 V : vertical interval of tool opening

5. It should preferably be stated in the description column, measuring the temperature and moisture content of the test specimen immediately after the cutting.

4. Static accuracy inspection methods

The static accuracy inspections of the slicer shall be in accordance with Table 4.

Table 4. Static accuracy inspections

Unit: mm

No.	Inspection item	Measuring method	Diagram for measuring method	Permissible value
1	Straightness of tool mounting plane	Horizontal plane	Place a straight-edge in longitudinal direction and on diagonal lines of the tool mounting plane, measure clearances with a feeler gauge, and consider the maximum value thereof to be the measured value.	0.03 per 1000
	Vertical plane (2)		Place a straight-edge in longitudinal direction on the tool mounting plane, measure clearances with a feeler gauge, and consider the maximum value thereof to be the measured value.	0.03 per 1000

Table 4. Continued

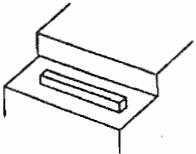
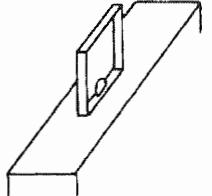
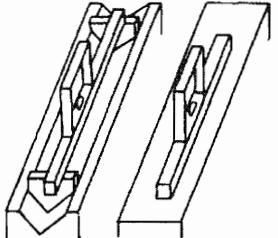
No.	Inspection item	Measuring method	Diagram for measuring method	Permissible value
2	Straightness of nose bar mounting plane ⁽²⁾	Place a straight-edge in longitudinal direction of the horizontal plane of the nose bar mounting plane, measure clearances with a feeler gauge, and consider the maximum value thereof to be the measured value.		0.03 /m
3	Straightness of sliding face of planer table ⁽³⁾	Place a precision level on the sliding face of planer table ⁽⁴⁾ , take the readings at least on every 1000 mm, and consider the maximum difference thereof to be the measured value.		0.04 /m
4	Parallelism of left and right sliding faces of planer table (in horizontal plane)	Place straightedges on the left and right sliding faces of planer table, put precision levels on them, take readings of respective precision levels, consider the maximum difference thereof to be the measured value ⁽⁵⁾ .		0.04 /m

Table 4. Continued

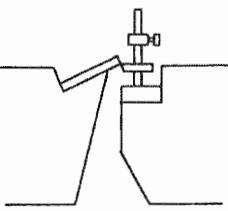
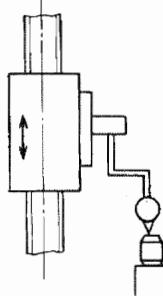
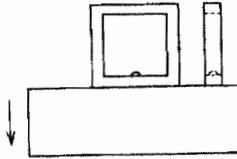
No.	Inspection item	Measuring method	Diagram for measuring method	Permissible value
5	Parallelism of tool mounting plane to nose mounting plane (in vertical plane)	Fix a test bar to the tool mounting plane, allow a height gauge to touch closely to the horizontal plane of the nose bar mounting plane at the position of 200 mm apart from both ends of the nose bar mounting plane, measure the distances respectively between the tool mounting plane and the test bar, and consider the difference thereof to be the measured value.		0.05
6	Cumulative error of ascending and descending screw of flitch table	When the flitch table has been ascended and descended being set to an appropriate sheeting amount, measure the distance of the flitch table ought to travel and the actually travelled distance with an end standard of a definite length and a test indicator, and consider the difference thereof to be the measured value. This measurement shall be carried out on 3 places of the center and both ends(?) of the ascending and descending screw part.		0.05 per 100

Table 4. (Continued)

No.	Inspection item	Measuring method	Diagram for measuring method	Permissible value
7	Parallelism of descending motion of flitch table	Place precision levels respectively in the front and rear and left and right directions of the upper face of the flitch table, and consider the maximum difference of readings of respective precision levels within the travelled distance of the flitch table which has descended by 30 mm from the upper most position to the lower most position ⁽⁸⁾ to be the measured value.		0.06 /m

Notes (2) For a machine which does not require the said accuracy according to the types of machine, this inspection may be omitted.

(3) This measurement shall be carried out on the left and right sliding faces of the planer table.

(4) In the case where the sliding face of the planer is of V-shaped groove, measurement shall be made by placing a precision levels on a test bar.

(5) In the case where the sliding face of the planer table is of V-shaped groove, measurement shall be made by placing a straightedge on the block of the same dimensions conforming to the V-shape.

(6) This measurement shall be carried out on the left and right ascending and descending screws.

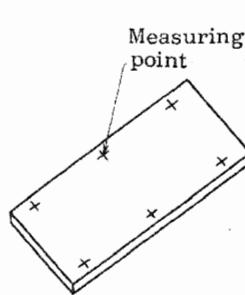
(7) Measurement shall be made avoiding the incomplete threaded parts.

(8) The lower most descended position shall be the immediately before the position where the flitch table just gets in touch with the planer table.

Remarks: For the slicer which is not provided with the said functions, the inspection items corresponding to these in Table 4 shall be omitted.

5. Machining accuracy inspection method

Table 5. Machining accuracy inspection

No.	Inspection item	Measuring method	Diagram for measuring method	Unit: mm
				Permissible value
1	Accuracy on thickness	Measure the thicknesses of the measuring points of the veneers which have been cut into 10 sheets or more continuously ⁽¹⁰⁾ from a test specimen ⁽⁹⁾ with an external micrometer ⁽¹¹⁾ , consider the minimum value, among the divided values of the maximum differences of respective measuring points by the respective mean values, to be the measured value.		0.15

Notes⁽⁹⁾ The test specimen shall be the flitch material of the length corresponding to the function, approximately 200 mm in thickness and approximately 300 mm in width.

⁽¹⁰⁾ Several sheets at beginning and completion of cuttings shall be omitted.

⁽¹¹⁾ The measuring points shall be in accordance with the diagram for measuring method.

Reference Standards:

JIS B 6501-Test Code for Performance and Accuracy of Wood Working Machinery

JIS Z 8203-SI Units and the Use of Their Multiples and of Certain Other Units

B 6599-1991
Edition 1

Japanese Text

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